to the names of the district, the school or the community. Use the words "the school" in referring to the applicant in the responses to the statements.

The following data is required to assist the panelists in the evaluation of the application:

Type of School	**Grade Levels**	**School Enrollment** 267
____ Elementary School	_____	
____ Middle School	_____	**Name of the School's Specialization or Whole-School Reform Model**
____ Junior High School	_____	
_X_ High School	9-12	Marine Science
____ Other: _____	_____	_____

Location:
____ Urban/city; ____ Suburban with urban characteristics; _X_ Suburban; ____ Small City/Town; _____ Rural

Previous Star School: Yes _X_ No__ If Yes, Year(s) _1997-1998_____

KEYBOARDED RESPONSES to the statements below must be **no more than a total of five pages. Keyboard the statement followed by the response.**

1. Describe the school's specialization or whole-school reform model and its objectives, the student educational needs and the specific *Core Curriculum Content Standards, including the Cross-Content Workplace Readiness Standards,** that it addresses. Detail how it promotes high student achievement and contributes to school-wide accomplishments.

2. Describe the professional development activities and research of the school's faculty. Detail to what extent these activities contribute to exemplary teaching practices in their classrooms. Explain the link between these activities and the specialization or whole-school reform model.

3. Describe the leadership style of the school's administration and how the management and educational program demonstrate administrative and fiscal efficiency. Describe any innovative scheduling and/or management strategies implemented.

4. Describe the school's overall approach to assessment. How are your methods aligned to the specialization or whole-school reform model? How are you ensuring that the content you are measuring is consistent with the *Core Curriculum Content Standards?* Provide student performance data for the school years 2000-2001 and 2001-2002 using state tests and, if you wish, national and/or district standardized norm-referenced tests, criterion-referenced tests, and/or alternative assessments. Explain any dramatic increase or decrease. Specify which groups, if any, are excluded from the assessments for which you provide data. Give the percentage of students excluded. You may use a chart.

5. Describe collaborative efforts with families, business, the community, school districts, and/or higher education that contribute to a school environment governed by the students' needs and promoting high student achievement.

6. **Previous Star School Winners Only**: Provide a one-page addendum to your application that describes efforts to expand or replicate the specialization or whole-school reform model within the school and/or the district. Have there been dissemination activities beyond the school or district? If so, please elaborate.

*The 2002 edition of the ***Core Curriculum Content Standards*** published by the New Jersey State Department of Education was disseminated to all districts and charter schools and is available on line through the department's website at http://www.state.nj.us/education.

1. Describe the school's specialization or whole-school reform model and its objectives, the student educational needs and the specific Core Curriculum Content Standards, including Cross-Content Workplace Readiness Standards that it addresses. Detail how it promotes high student achievement and contributes to school-wide accomplishments.

Our school's stated mission is to "create literate, moral, productive members of society empowered to meet the challenges of a global community by providing a unique environment." To serve that end, the school offers a specialized curriculum focused on the Marine Sciences and technological studies to students throughout the state of New Jersey. The program is a four-year college preparatory course of study with an emphasis on science, technology, and mathematics offering students numerous opportunities to learn through real-time, hands-on experiences and at-sea research. Courses in both marine sciences and technology systems are requirements for all students in their first three years of study. At the senior level, students elect a program strand that concentrates their study in either marine science or systems engineering. Additionally, all students are enrolled in the Naval Junior Reserve Officer Training Corps (NJROTC), which supports and expands our focus on the marine environment and leadership skills.

Strong academic performance and workplace readiness are the goals of all programs at the school. Through our focus on research, critical thinking and problem solving in all course work, we provide students with transferable skills that will ensure success in post-secondary education and in future careers. The school's location on the beach and bay, the school-owned 65' research vessel, and the school's state of the art seawater laboratory located at the James J. Howard Marine Sciences Laboratory allow a more experiential approach to studies. Through laboratory experiences, research projects, and field studies, such as water testing, marine life identification, population surveys, beach profiling, and analysis, students develop both a working knowledge of coastal marine environments and how they relate to the world. The close working relationship with research scientists from the National Oceanic and Atmospheric Administration (NOAA), Clean Ocean Action (COA), and New Jersey universities provides students with current practices, procedures, and expectations of the scientific and environmental community.

Technological studies encourage students to develop a logical approach to problem solving, and design implementation. The systems engineering courses are designed to mirror the industrial workplace whereby students are taken through all steps of the design process from concept to product. Each strand requires students to work with mentors from the private sector who advise students in the progress of their projects. Both marine science and technology studies culminate in a year-long project executed in the senior year with a public exhibit and presentation of their achievements at the end of the school year. In addition to offering students the opportunity to acquire leadership and problem-solving skills, the naval science curricula provides students with course content areas such as seamanship, navigation, maritime geography, meteorology, astronomy, and international law of the sea. The performance-based, process-oriented nature of these courses filters into all academic courses taught on campus. Instructors use interactive methodologies and encourage critical, analytical thinking, and knowledge of process in course work. Core Curriculum Content Standards for Science (5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.9, 5.10) are addressed through marine science, technology and naval science courses, as are all standards and indicators for cross-content workplace readiness.

2. Describe the professional development activities and research of the school's faculty. Detail to what extent these activities contribute to exemplary teaching practices in their classrooms. Explain the link between these activities and the specialization or whole-school reform.

The teachers at our school share a sense of commitment to life-long learning and academic excellence. They continually avail themselves of opportunities to enroll in workshops offered by the district, where staff development has been a priority since the inception of the school. For example, workshops taught by staff members have allowed our teachers to enhance their technical skills by learning to create digital video clips, which they can then use in their classrooms. Teachers also attend seminars and related courses designed to keep current in their field, further strengthening their ability to instruct. The scope and variety of professional development activities can be exemplified by the following samples:

- Participation in the Teacher at Sea Program that provides educators with the opportunity to live aboard and conduct research on oceanographic research vessels.
- Training on the Palm Pilot/Imagiwork Data Probe System leading to use of Palm Pilots by sophomore and junior science classes to collect and analyze water chemistry data.
- Training on Pro-Desktop, a three-dimensional software drawing program used to design machine parts; the training program also provided free software which will allow students to be able to use the software both in the classroom and at home.
- Training the Computer Aided Design teacher in CAD 2002 and Architectural desktop programs, which are used by universities and professionals in their field.
- Attendance at week long AP Calculus preparation conferences in Connecticut and Maryland.
- Membership in the National Consortium of Specialized Secondary Schools for Mathematics, Science and Technology provides opportunities for staff development in our areas of specialization.
- Attendance at Law Related Education Workshops sponsored by the New Jersey State Bar Foundation leading to use of Mock Trials and other courtroom activities in the classroom.
- Writing workshops with professional published writers, which enhance writing instruction in the classroom.
- Completion of coursework leading to teacher certification in psychology.
- Completion of a Master's Degree in Library Science from Syracuse University, completion of a Master's Degree in Computers and Education from Teachers College, Columbia University with plans to continue work in that field to eventually result in a Doctoral Degree.

Teachers replicate effective strategies and incorporate new content knowledge learned in workshops and/or continuing education courses. Curriculum is reevaluated and revised through this continued commitment to learning.

3. Describe the leadership style of the school's administration and how the management and educational program demonstrate administrative and fiscal efficiency. Describe any innovative scheduling and/or management strategies implemented.

The administration's leadership style can best be described as collaborative and consensus driven. Together with the staff and students, the principal has created a community of learners and a community of leaders. Instructors are encouraged to assume leadership roles within the school, while the principal is charged with making final decisions regarding all aspects of the school curriculum and the overall operation of the school. Using the school's mission as the guiding focus, the staff identifies and prioritizes issues through an Instructional Council. Consisting of representatives from each department and the principal, the council meets monthly to discuss school-wide concerns. Through this exchange of ideas, the group works collectively toward the success of the task at hand. This leadership style fosters a climate that encourages a team approach to teaching and problem solving. The discussions in Instructional Council assisted in the smooth transition to our current alternating block schedule. A more recent result of the Council's activities was the implementation of monthly meetings of teachers by grade level. At these meetings, staff can share information about class projects, trips and activities. These meetings have also provided a forum to identify shared concerns about individual students. Teachers from our school also participate in the district curriculum coordinators focus group.

Students have the opportunity to express their ideas and see them implemented through an active Student Council organization. An equally active Parent-Teacher Student Organization (PTSA) helps sponsor projects which benefit the school. Through their fundraising efforts, laptops have been purchased so that students who become ill can complete CAD projects at home. A School Advisory Council consisting of members of the professional community is available to act as consultants when the need exists. Because of the location of the school on a National Park, students benefit from the utilization of neighboring research facilities. Through partnerships with the National Oceanic and Atmospheric Administration, Clean Ocean Action, the New Jersey Marine Sciences Consortium, and the National Park Service, the school and students have access to their instructional facilities, laboratories, libraries and equipment. The school's floating research vessel is also berthed at the US Coast Guard Station. These cooperative efforts contribute to the overall fiscal efficiency of the school.

4. Describe the school's overall approach to assessment. How are your methods aligned to the specialization or whole-school reform model? How are you ensuring that the content you measure is consistent with the Core Content Curriculum Standards? Provide student performance data for the school years 2000-2001 and 2001-2002 using state tests, and if you wish, national and/or district standardized norm-referenced test, criterion-referenced tests, and/or alternative assessments. Explain any dramatic increase or decrease. Specify which groups, if any, are excluded from the assessments for which you provide data. Give the percentage of students excluded. You may use a chart.

Collegial discussion about the authenticity of our assessment practices, and their link to the state standards is an essential element of the district's continued interest in improving

student instruction. Consistent with our school's vision of producing literate, critical thinkers who will become problem-solving members of society, our assessments reflect recognition of differences in learning styles, and multiple intelligences. Assessments also reflect our school's emphasis on hands-on learning. While we employ traditional methods of assessment such as tests and quizzes, we promote performance-based assessments that allow for a more complete view of student ability. Projects that require multiple steps involving critical thinking, problem solving and research are required throughout the curriculum. The oral presentation of students' projects is supplemented by technology, such as computer-generated slides and the electronic portfolios developed by students during the course of their research project. A prime example of this approach is the senior research project completed in either their oceanography or systems engineering class. For example, in 2001-02, a student conducted research with a Princeton scientist as part of his project entitled "Interactive Plasma Display." Subsequently he has presented at the American Physical Society November 2002 Plasma Convention in Orlando, Florida. He has also presented to United States Department of Energy officials.

To ensure that the curriculum on which the students are assessed addresses the state's Core Content Standards, the staff has been actively engaged in aligning and cross-referencing unit objectives to state standards. As a result of that effort, the social studies department wrote a two-year district pupil performance objective, which is designed to increase the attention given to the arts in the freshman and sophomore curricula.

The school and our students have been recognized for excellence in many areas. The following is a partial listing of those recognitions:

Award/Exam	*2000-2001*	*2001-2002*
• National Merit Commendations	3	7
• SAT Scores: Verbal/Mathematics	610/599	610/608
• HSPT: Reading/ Math/ Writing	100%/100%/100% passing	
• HSPA: Language Arts Literacy/Math		100%/100% passing
• Edward J. Bloustein Scholars	5	6
• Boys State	1	1
• Girls State	1	1
• Hugh O'Brien Youth Seminar (HOBY)	1	1
• United States Naval Academy		1
• United States Military Academy		1
• United States Coast Guard Academy	1	1
• United States Air Force Academy	1	1
• NROTC Scholarships	10	5
• AFROTC Scholarships	2	2

- In 2002 a student received the Monmouth County Water Resources Association Youth Award for her work on Acid Rainfall in Monmouth County.
- In 2001, The College of New Jersey Department of Technological Studies recognized a staff member as Alumnus of the Year.
- Faculty members have received New Jersey Best Practice awards for Social Studies in 98-99, 99-00 and for World Languages in 01-02.

- Faculty members have received New Jersey Association for Supervision and Curriculum Development awards for a student based project in 2002, two practices in 2001, and one practice in 2000.
- A Toyota Tapestry Grant was awarded to engage students in a study calculating the rate of erosion in the critical zone of Sandy Hook to estimate the potential cost of maintaining beach access and recreational activities.
- In 2001, The New Jersey Principals and Supervisors Association recognized our principal as the MET LIFE/NASSP Principal of the Year.
- In 1998 the school was recognized as both a Blue Ribbon and New American High School by the United States Department of Education.

Our students are heterogeneously grouped and all students take the state standardized tests. While we do offer an SAT workshop after school, direct instruction designed to prepare students for the SAT's is not conducted in the classrooms. However, we see continued improvement in SAT scores.

5. Describe collaborative efforts with families, businesses, the community, school districts, and/or higher education that contribute to a school environment governed by the students' needs and promoting high student achievement.

Our school has developed many working relationships with local environmental, scientific and educational organizations. Students have benefited from mentorships provided by individuals from many organizations including NOAA, COA, National Marine Debris Conservancy, New Jersey Marine Sciences Consortium, the United States Coast Guard, the United States Navy, Rider University, Georgian Court College, The College of New Jersey, New Jersey Institute of Technology and Richard J. Stockton State College. Members of the local business community also serve as mentors. Among our current mentors are individuals who work for New Jersey Natural Gas, Public Service Electric and Gas Company, Diverstwo, International Fragrances and Flavors, Jenkinsons Aquarium, and AFZ Architects. The School has developed agreements with Richard J. Stockton State College, Rider University and Georgian Court College which allow students who attend to receive any where from 4-8 college credits for their marine science courses. US Coast Guard Auxiliary personnel teach the Coast Guard Boater Safety course to all 9th grade students. Through the NJROTC, students can attend summer leadership camps and Mini-Officer Candidate School. Our students have worked directly with groups from local elementary and middle schools to introduce them to the marine sciences and the marine environment through the Schools Helping Schools program. This award-winning activity will be featured on PBS' Classroom Close-up in February and March. Students help organize the bi-annual beach clean-up in conjunction with Clean Ocean Action. The Student Council conducts a Toys for Tots campaign and coordinates a Thanksgiving Food drive in conjunction with the Key Club. Key Club students also volunteer with Habitat for Humanity projects.

Parent involvement is also a high priority at our school. Parents are willing to serve as chaperones and have acted as mentors for other students in the research program. They are also involved in committees that discuss the district pupil performance objectives, as well as the Middle States Accreditation for Growth process.

6. Provide a one-page addendum to your application that describes efforts to expand or replicate the specialization or whole-school reform model within the school and/or district. Have there been dissemination activities beyond the school or district? If so, please elaborate.

Since our previous recognition as a Star School in 1997, we have developed additional courses that enhance the education provided for our students. All students now complete the junior Systems Engineering I course. The senior design technology strand, an Advanced Placement Physics and a Math Research course have also been added to the curriculum. The creation of a state of the art CAD lab, as well as the adoption of AUTOCAD 2002, Architectural Desktop and 3D Studio Max programs illustrates our continued commitment to the development of the school's technology specialization. Twenty-four iBooks on carts allow us the opportunity to make mini-labs in any classroom, as needed. Expanded use of the school's electronic bulletin board system facilitates online discussion to augment classroom instruction. We have expanded our partnerships with academic and scientific organizations increasing the number of mentorships available in our science curriculum. The Computer Applications/Data Analysis course offered in the freshman year and the math research course offered in the junior and senior year provide students with the background needed to conduct scientific research, gather and interpret data, and apply it to their research/design project. Teachers have served as mentors for staff throughout our district for additional schools that were developed with a career theme. They have also taken leadership roles in curriculum revision and alignment with the state's Core Content Standards.

At the community level, computer courses have been offered free of charge by our staff. Our school holds information sessions to highlight the school's programs to interested parents and students throughout the state. Our school's web page makes teacher projects available on line. Teachers have also posted their best practices on the New Jersey Department of Education's web site. Students have presented design projects to business organizations. Some of our students have been invited to continue their research based upon the excellent quality of work in their technology and oceanographic research projects.

Together with students, a staff member has presented a workshop on authentic assessment to student teachers, and presented a senior systems project at a state conference. Teachers have also presented workshops at the New Jersey Marine Education Association and Rutgers University Community Connections conference. The school's administrator and teachers have been invited to attend national conferences to speak on teaching strategies. The school has hosted visitors from the Consulate General of the Peoples' Republic of China, the US Department of Education, representatives from Office of Vocational and Adult Education in Washington DC and teachers and administrators from other schools and districts in New Jersey and other states for the purposes of learning how we integrate our curriculum, sharing ideas for creating a small learning community and/or creating a career academy with a distinct specialization. Finally, a grant has been provided to package the senior Systems Engineering II curriculum so it can be replicated at other schools. Through these efforts, our school offers a model for successful college and post-secondary partnerships, teaching methodologies, curriculum integration and the development of small learning communities with a career theme at the local, state and national level.